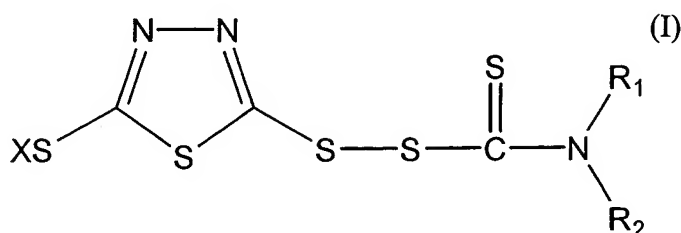
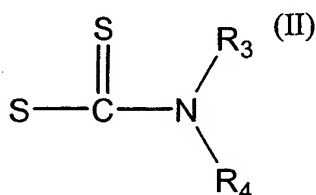


WE CLAIM:

1. An additive comprising a dithiocarbamyl-1,3,4-thiadiazole derivative having formula (I), or an isomer thereof:



where R_1 and R_2 are independently a radical being either an alkyl, a cycloalkyl, an alkenyl, an aryl, an arylalkyl, or an alkylaryl, or R_1 and R_2 together form a 3- to 7-membered cyclic ring structure; and X is (i) hydrogen, (ii) a dithiocarbamyl radical having formula (II):



where R_3 and R_4 are independently a radical being either an alkyl, a cycloalkyl, an alkenyl, an aryl, an arylalkyl, or an alkylaryl, or R_3 and R_4 together form 3- to 7-membered cyclic ring structure, or (iii) a mixture thereof.

2. The additive of Claim 1, wherein X is hydrogen, and R_1 and R_2 are each ethyl.

1 3. The additive of Claim 1, wherein X is hydrogen, and R₁ and R₂ are each
2 isopropyl.

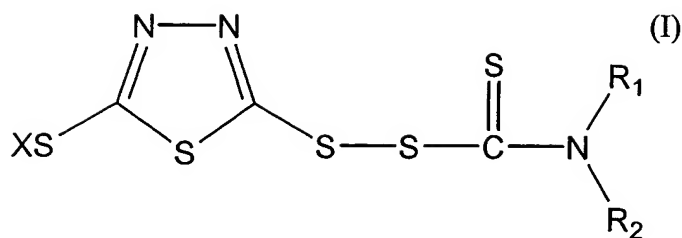
1 4. The additive of Claim 1, wherein X is hydrogen, and R₁ and R₂ are each
2 selected from the group consisting of butyl, isobutyl and mixtures thereof.

1 5. The additive of Claim 1, wherein X is hydrogen, and R₁ and R₂ together
2 form a 6-membered cyclic ring structure.

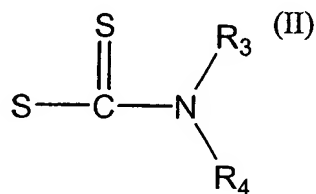
1 6. The derivative of Claim 5, wherein the 6-membered cyclic ring structure is
2 a piperidyl radical.

1 7. The additive of Claim 1, further comprising a diluent.

1 8. A curable polymer composition comprising a major amount of at least one
2 halogenated polymer and at least one additive comprising a dithiocarbamyl-1,3,4,-thiadiazole
3 derivative having formula (I), or an isomer thereof:



5 where R_1 and R_2 are independently a radical being either an alkyl, a cycloalkyl, an alkenyl, an
 6 aryl, an arylalkyl, or an alkylaryl, or R_1 and R_2 together form a 3- to 7-membered cyclic ring
 7 structure; and X is (i) hydrogen, (ii) a dithiocarbamyl radical having formula (II):



9 where R_3 and R_4 are independently a radical being either an alkyl, a cycloalkyl, an alkenyl, an
 10 aryl, an arylalkyl, or an alkylaryl, or R_3 and R_4 together form 3- to 7-membered cyclic ring
 11 structure, or (iii) a mixture thereof.

1 9. The curable polymer composition of Claim 8, wherein X is hydrogen, and
 2 R_1 and R_2 are each ethyl.

1 10. The curable polymer composition of Claim 8, wherein X is hydrogen, and
 2 R_1 and R_2 are each isopropyl.

1 11. The curable polymer composition of Claim 8, wherein X is hydrogen, and
2 R_1 and R_2 are each selected from the group consisting of butyl, isobutyl and mixtures thereof.

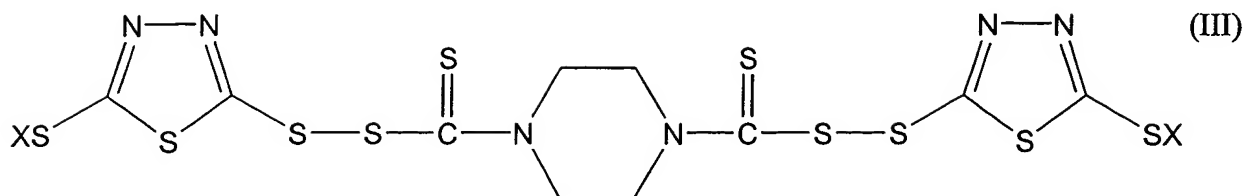
1 12. The curable polymer composition of Claim 8, wherein X is hydrogen, and
2 R_1 and R_2 together form a 6-membered cyclic ring structure.

1 13. The curable polymer composition of Claim 8, wherein the halogenated
2 polymer is a chlorinated polymer.

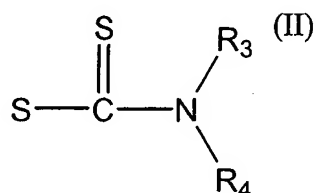
1 14. The curable polymer composition of Claim 13, wherein the chlorinated
2 polymer is selected from the group consisting of homopolymers of epichlorohydrin, copolymers
3 of epichlorohydrin and ethylene oxide or propylene oxide, polychloroprene, chlorinated
4 polyolefins, chlorosulfonated polyolefin, polychloroalkylacrylates, chlorobutyl rubber and
5 mixtures thereof.

1 15. The curable polymer composition of Claim 13, wherein the chlorinated
2 polyolefins is chloropolyethylene.

1 16. An additive comprising a dithiocarbamyl-bis-1,3,4,-thiadiazole derivative
2 having formula (III), or an isomer thereof:



4 where X is (i) hydrogen, (ii) a dithiocarbamyl radical having formula (II):

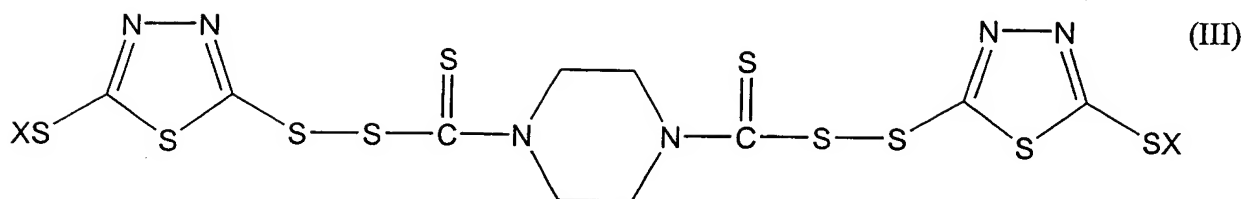


6 where R₃ and R₄ are independently a radical being either an alkyl, a cycloalkyl, an alkenyl, an
 7 aryl, an arylalkyl, or an alkylaryl, or R₃ and R₄ together form 3- to 7-membered cyclic ring
 8 structure, or (iii) a mixture thereof.

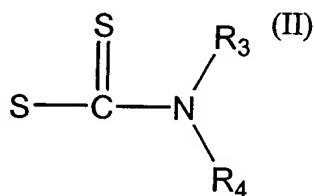
1 17. The additive of Claim 16, wherein X is hydrogen.

1 18. The additive of Claim 16, further comprising a diluent.

1 19. A curable polymer composition comprising a major amount of at least one
 2 halogenated polymer and at least one additive comprising a dithiocarbamyl-bis-1,3,4,-thiadiazole
 3 derivative having formula (III), or an isomer thereof:



5 where X is (i) hydrogen, (ii) a dithiocarbamyl radical having formula (II):



7 where R₃ and R₄ are independently a radical being either an alkyl, a cycloalkyl, an alkenyl, an
 8 aryl, an arylalkyl, or an alkylaryl, or R₃ and R₄ together form 3- to 7-membered cyclic ring
 9 structure, or (iii) a mixture thereof.

1 20. The curable polymer composition of Claim 19, wherein X is hydrogen.

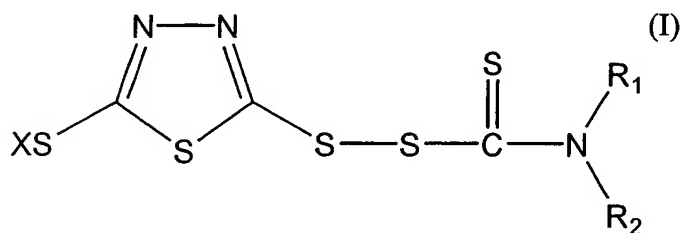
1 21. The curable polymer composition of Claim 19, wherein the halogenated
 2 polymer is a chlorinated polymer.

1 22. The curable polymer composition of Claim 21, wherein the chlorinated
 2 polymer is selected from the group consisting of homopolymers of epichlorohydrin, copolymers
 3 of epichlorohydrin and ethylene oxide or propylene oxide, polychloroprene, chlorinated

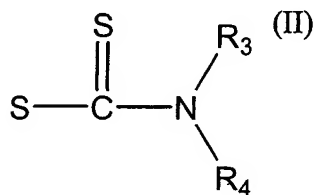
polyolefins, chlorosulfonated polyolefin, polychloroalkylacrylates, chlorobutyl rubber and mixtures thereof.

23. A method of preparing a cured polymer composition, which comprises:
admixing at least one halogenated polymer with at least one additive
including at least one thiadiazole derivative selected from the group consisting of:

(a) a dithiocarbamyl-1,3,4-thiadiazole derivative having formula (I), or an isomer thereof:

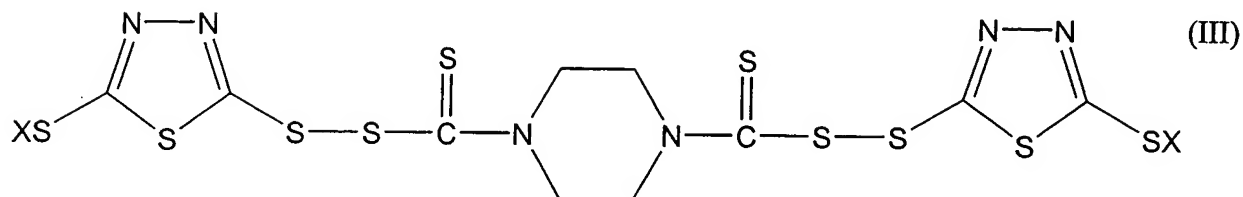


where R_1 and R_2 are independently a radical being either an alkyl, a cycloalkyl, an alkenyl, an aryl, an arylalkyl, or an alkylaryl, or R_1 and R_2 together form a 3- to 7-membered cyclic ring structure; and X is (i) hydrogen, (ii) a dithiocarbamyl radical having formula (II):

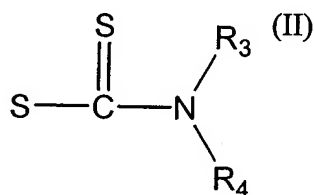


where R_3 and R_4 are independently a radical being either an alkyl, a cycloalkyl, an alkenyl, an aryl, an arylalkyl, or an alkylaryl, or R_3 and R_4 together form 3- to 7-membered cyclic ring structure, or (iii) a mixture thereof;

(b) a dithiocarbamyl-bis-1,3,4-thiadiazole derivative having formula (III), or an isomer thereof:



where X is (i) hydrogen, (ii) a dithiocarbamyl radical having formula (II):



where R_3 and R_4 are independently a radical being either an alkyl, a cycloalkyl, an alkenyl, an aryl, an arylalkyl, or an alkylaryl, or R_3 and R_4 together form 3- to 7-membered cyclic ring structure, or (iii) a mixture thereof; and

curing the admixture to form the cured composition.

24. The method of Claim 23, wherein at least one thiadiazole derivative is a derivative having formula (I), X is hydrogen, and R_1 and R_2 are each ethyl.

25. The method of Claim 23, wherein at least one thiadiazole derivative is a derivative having formula (I), X is hydrogen, and R_1 and R_2 are each isopropyl.

1 26. The method of Claim 23, wherein at least one thiadiazole derivative is the
2 derivative having formula (I), X is hydrogen, and R₁ and R₂ are selected from the group
3 consisting of butyl, isobutyl and mixtures thereof.

1 27. The method of Claim 23, wherein at least one thiadiazole derivative is the
2 derivative having formula (I), X is hydrogen, and R₁ and R₂ together form a 6-membered cyclic
3 ring structure.

1 28. The method of Claim 23, wherein at least one thiadiazole derivative is the
2 derivative having formula (III) and X is hydrogen.

1 29. The method of Claim 23, wherein the halogenated polymer is a
2 chlorinated polymer.

1 30. The method of Claim 29, wherein the chlorinated polymer is selected from
2 the group consisting of homopolymers of epichlorohydrin, copolymers of epichlorohydrin and
3 ethylene oxide or propylene oxide, polychloroprene, chlorinated polyolefins, chlorosulfonated
4 polyolefin, polychloroalkylacrylates, chlorobutyl rubber and mixtures thereof.

1 31. The curable polymer composition of Claim 29, wherein the chlorinated
2 polyolefins is chloropolyethylene.